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EXAMINER	
ALI, FARHAD	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/671,804	TANAKA ET AL.	
	Examiner	Art Unit	
	FARHAD ALI	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 11-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 11-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims:

Claims 1-8 and 11-20 are pending in this Office Action.

Claims 1, 2, 11, 13-15, and 17-19 are amended.

Claims 9-10 are cancelled.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 5-8, and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,366,622 B1) in view of Lee et al. (US 2002/0090968 A1).

Claim 1

Brown teaches a master communication device capable of simultaneously communicating with slave communication devices within a first limited number determined in advance, comprising:

a communication judgment unit configured to judge whether or not one of said slave communication devices which has issued a communication request is currently connected ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 28 Lines 1-5, “The INQUIRY substate is initiated in state 1302. If there is a hit,

or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306"); and

a communication connection unit configured to connect said slave communication device judged not to be connected by said communication judgment unit ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 27 Lines 41-47 "The PAGE SCAN substate is initiated in state 1266 by the device which then becomes the master. If there is a hit from a slave, the slave response substate 1268 is entered. If there is no hit, the standby or connection state 1264 is reentered. Once in state 1268, if the slave responds before a timeout period, then the connected state 1270 is entered").

Brown does not specifically disclose a connected number judgment unit configured to judge whether or not the number of said slave communication devices connected currently reaches a second limited number less than said first limited number; a release selection unit configured to select at least one of said slave communication devices to be released, when determined to have reached said second limited number; and a communication release unit configured to release the selected slave communication device

Lee teaches in paragraph [0063-0069] "The master device determines the level of the priority that is requested by the new slave device (step S203). When the high priority is requested by the new slave device (step S204), the master device determines whether the current number of the slave devices of high priority in the Piconet is smaller than the predetermined maximum number of the slave devices that could have high

priority in the Piconet, i.e., the high priority maximum number (step S210). If the current number of the slave devices of high priority is smaller than the high priority maximum number, the master device assigns the high priority to the new slave device (step S212). If the current number of slave devices of high priority is greater than or equal to the high priority maximum number, the master device determines whether the current number of slave devices of medium priority is smaller than the predetermined medium priority maximum number (step S214)" in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of Brown to include "The master device determines the level of the priority that is requested by the new slave device" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 2

The modified Brown reference teaches the master communication device according to claim 1, further comprising:

a waiting registration unit configured to register in an order said slave communication device which issues said communication request, in the issued order, when the number of currently connected slave communication devices is determined to have reached said second limited number (see claim 1 rejection and [Brown] Column 28

Lines 18-27 “FIG. 29G illustrates the hold sequence, which as mentioned above, will probably not be included in a preferred embodiment of the architecture 1100, but may be included in other embodiments. First, the master and slave agree to hold in state 1320. The standby or connection state 1322 is then entered for the specified duration, followed by the slave waking up and synchronizing to the master in state 1324. If there is a hit, the connection state is entered for the remaining packets in state 1326. If not, the standby or connection state 1322 is reentered”); and

a communication connection unit configured to select and connect at least one of said slave communication device in the order registered in said waiting registration unit. ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 27 Lines 49-55, “FIG. 29B illustrates the page sequence. The CSM 1244 begins in the standby or connection state 1276 (for duration T.sub.page scan). The PAGE substate is initiated in state 1278. If there is a hit, the master response substate 1280 is entered. If there is no hit, the standby or connection state 1276 is reentered. Once in state 1280, if the master responds before a timeout period, then the connected state 1282 is entered”).

Claim 5

The modified Brown reference teaches the master communication device according to claim 1, further comprising a connection release unit configured to release connection for said slave communication device, when the connected slave communication device has not performed data transferring during not less than a

prescribed period ([Brown] Column 28 Lines 8-12, "FIG. 29E illustrates the active sequence. The CSM 1244 begins in the standby or connection state 1308. If there are periodic transactions with remote units in state 1310, then the connection state 1312 is entered. If not, the standby or connection state 1308 is reentered").

Claim 6

The modified Brown reference teaches the master communication device according to claim 1, wherein release of connection for said slave communication device is performed by setting said slave communication device to be in an electric power saving mode ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

Claim 7

The modified Brown reference teaches the master communication device according to claim 6, wherein communication for said slave communication device is performed according to a specification of Bluetooth;

said master communication device is a master equipment;

said slave communication device is a slave equipment; and

said electric power saving mode is a park mode.

([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7" and Column 28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

Claim 8

The modified Brown reference teaches the master communication device according to claim 1, wherein communication for slave communication device is performed according to a specification of Bluetooth. ([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7").

Claim 11

Brown teaches a communication control apparatus which controls a slave communication device connected to a master communication device capable of simultaneously communicating with said slave communication device within a first limited number determined in advance, comprising:

a connection report receiving unit configured to receive a connection report from said slave communication device newly connected to said master communication device; a connection information registration unit configured to register information relating to said slave communication device currently connected to said master communication device ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 1-5, "The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306").

Brown does not specifically disclose a connected number judgment unit configured to judge that the number of said slave communication devices connected to said master communication device reaches a second limited number less than the first limited number, based on information registered in said connection information registration unit; a communication device selection unit configured to select at least one of said slave communication devices that connection for said master communication device is to be released, when determined to have reached said second limited number; and a release instruction unit configured to transmit a release instruction to said slave communication device selected by said communication device selection unit.

Lee teaches in paragraph [0063-0069] "The master device determines the level of the priority that is requested by the new slave device (step S203). When the high priority is requested by the new slave device (step S204), the master device determines whether the current number of the slave devices of high priority in the Piconet is smaller than the predetermined maximum number of the slave devices that could have high

priority in the Piconet, i.e., the high priority maximum number (step S210). If the current number of the slave devices of high priority is smaller than the high priority maximum number, the master device assigns the high priority to the new slave device (step S212). If the current number of slave devices of high priority is greater than or equal to the high priority maximum number, the master device determines whether the current number of slave devices of medium priority is smaller than the predetermined medium priority maximum number (step S214)" in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of Brown to include "The master device determines the level of the priority that is requested by the new slave device" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 12

The modified Brown reference teaches the slave communication device according to claim 11, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and a release of connection between said master communication device and said slave communication device is performed to be set in a park mode ([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams

illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7" and Column 28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

Claim 13

Brown teaches a communication system, comprising:

at least one of slave communication devices; and

a master communication device configured to be able to communicate simultaneously with said slave communication device within a first limited number determined in advance, ([Brown] Column 4 Lines 15-17 "A piconet starts with two connected devices, such as a portable PC and cellular phone, and may grow to eight connected devices")

wherein said master communication device includes:

a communication judgment unit configured to judge whether or not one of said slave communication devices which has issued a communication request is currently connected([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 1-5, "The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306");

a communication connection unit configured to connect said slave communication device determined not to be connected by said communication judgment unit ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 27 Lines 41-47 "The PAGE SCAN substate is initiated in state 1266 by the device which then becomes the master. If there is a hit from a slave, the slave response substate 1268 is entered. If there is no hit, the standby or connection state 1264 is reentered. Once in state 1268, if the slave responds before a timeout period, then the connected state 1270 is entered").

Brown does not specifically disclose a connected number judgment unit configured to judge whether or not the number of said slave communication devices connected currently reaches a second limited number less than said first limited number; a release selection unit configured to select at least one of said slave communication devices to be released, when determined to have reached said second limited number; and a communication release unit configured to release the selected slave communication device.

Lee teaches in paragraph [0063-0069] "The master device determines the level of the priority that is requested by the new slave device (step S203). When the high priority is requested by the new slave device (step S204), the master device determines whether the current number of the slave devices of high priority in the Piconet is smaller than the predetermined maximum number of the slave devices that could have high priority in the Piconet, i.e., the high priority maximum number (step S210). If the current number of the slave devices of high priority is smaller than the high priority maximum

number, the master device assigns the high priority to the new slave device (step S212). If the current number of slave devices of high priority is greater than or equal to the high priority maximum number, the master device determines whether the current number of slave devices of medium priority is smaller than the predetermined medium priority maximum number (step S214)" in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of Brown to include "The master device determines the level of the priority that is requested by the new slave device" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 14

The modified Brown reference teaches the communication system according to claim 13, wherein said master communication device includes:

a waiting registration unit configured to register said slave communication device which has issued said communication request, in the issued order, when the number of currently connected slave communication devices is determined to have reached said second limited number (see claim 13 rejection and [Brown] Column 28 Lines 18-27 "FIG. 29G illustrates the hold sequence, which as mentioned above, will probably not be included in a preferred embodiment of the architecture 1100, but may be included in

other embodiments. First, the master and slave agree to hold in state 1320. The standby or connection state 1322 is then entered for the specified duration, followed by the slave waking up and synchronizing to the master in state 1324. If there is a hit, the connection state is entered for the remaining packets in state 1326. If not, the standby or connection state 1322 is reentered"); and

a communication connection unit configured to select and connect at least one of said slave communication devices in the order registered to said waiting registration unit. ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 27 Lines 49-55, "FIG. 29B illustrates the page sequence. The CSM 1244 begins in the standby or connection state 1276 (for duration T.sub.page scan). The PAGE substate is initiated in state 1278. If there is a hit, the master response substate 1280 is entered. If there is no hit, the standby or connection state 1276 is reentered. Once in state 1280, if the master responds before a timeout period, then the connected state 1282 is entered").

Claim 15

Brown teaches the communication system according to claim 13, wherein said slave communication device includes:

a master communication device connection judgment unit configured to judge whether or not to be connected to said master communication device, when communication request for said master communication device has been issued ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 27 Lines 49-

55, “FIG. 29B illustrates the page sequence. The CSM 1244 begins in the standby or connection state 1276 (for duration T.sub.page scan). The PAGE substate is initiated in state 1278. If there is a hit, the master response substate 1280 is entered. If there is no hit, the standby or connection state 1276 is reentered. Once in state 1280, if the master responds before a timeout period, then the connected state 1282 is entered”);

a release report signal supply unit configured to transmit a release report to said communication control apparatus when connection for said master communication device is released; and

a connection release unit configured to release connection for said master communication device when a release instruction for said master communication device is received from said communication control apparatus, while being connected to said master communication apparatus ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 28 Lines 28-31, “First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment” and Column 5 Lines 52-53, “Slave units can also demand to be put into HOLD mode” where Hold and Park are both types of power saving modes and [Tanaka] applicant admits in paragraph [0014] “In the Bluetooth, an effective method called as the park mode is defined for temporary release”),

wherein said communication control apparatus includes:

a connection report receiving unit configured to receive a connection report from said slave communication device newly connected to said master communication

device; a connection information registration unit configured to register information relating to said slave communication devices currently connected to said master communication device ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 1-5, "The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306");

Brown does not specifically disclose a connected number judgment unit configured to judge whether or not the number of said slave communication device reaches said second limited number, based on the information registered to said connection information registration unit; a communication device selection unit configured to select at least one of said slave communication devices of which connection for said master communication device is to be released, when determined to have reached said second limited number; and a release instruction unit configured to transmit release instruction to said slave communication device selected by said communication device selection unit (See claim 13 rejection).

Lee teaches in paragraph [0063-0069] "The master device determines the level of the priority that is requested by the new slave device (step S203). When the high priority is requested by the new slave device (step S204), the master device determines whether the current number of the slave devices of high priority in the Piconet is smaller than the predetermined maximum number of the slave devices that could have high priority in the Piconet, i.e., the high priority maximum number (step S210). If the current number of the slave devices of high priority is smaller than the high priority maximum

number, the master device assigns the high priority to the new slave device (step S212). If the current number of slave devices of high priority is greater than or equal to the high priority maximum number, the master device determines whether the current number of slave devices of medium priority is smaller than the predetermined medium priority maximum number (step S214)" in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of Brown to include "The master device determines the level of the priority that is requested by the new slave device" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 16

The modified Brown reference teaches the slave communication device according to claim 13, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and a release of connection between said master communication device and said slave communication device is performed by setting in a park mode ([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7" and Column

28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

Claim 17

Brown teaches a computer readable medium comprising a computer program code for performing communication between at least one of slave communication devices and a master communication device capable of simultaneously communicating with said slave communication devices within a first limited number determined in advance, the computer program code performing:

judging by said master communication device whether or not one of said slave communication devices which has issued a communication request is connected currently ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 1-5, "The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306");

connecting said slave communication devices judged that said slave communication device is not connected currently, to said master communication device ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 27 Lines 41-47 "The PAGE SCAN substate is initiated in state 1266 by the device which then becomes the master. If there is a hit from a slave, the slave response substate

1268 is entered. If there is no hit, the standby or connection state 1264 is reentered. Once in state 1268, if the slave responds before a timeout period, then the connected state 1270 is entered");

Brown does not specifically disclose judging by said master communication device whether or not the number of said slave communication devices connected currently reaches a second limited number less than said first limited number; selecting by said master communication device at least one of said slave communication devices to be released, when determined to have reached said second limited number; and releasing the selected slave communication device by said master communication device.

Lee teaches in paragraph [0063-0069] "The master device determines the level of the priority that is requested by the new slave device (step S203). When the high priority is requested by the new slave device (step S204), the master device determines whether the current number of the slave devices of high priority in the Piconet is smaller than the predetermined maximum number of the slave devices that could have high priority in the Piconet, i.e., the high priority maximum number (step S210). If the current number of the slave devices of high priority is smaller than the high priority maximum number, the master device assigns the high priority to the new slave device (step S212). If the current number of slave devices of high priority is greater than or equal to the high priority maximum number, the master device determines whether the current number of slave devices of medium priority is smaller than the predetermined medium priority maximum number (step S214)" in order to "prevent an excessive number of

slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of Brown to include "The master device determines the level of the priority that is requested by the new slave device" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 18

The modified Brown reference teaches the medium according to claim 17, the computer program code further comprising:

judging by said master communication device whether or not one of said slave communication devices which has issued communication request is connected currently ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 1-5, "The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306");

judging by said master communication device whether or not the number of said slave communication devices connected currently reaches said second limited number (See claim 17 rejection and [Brown] Column 4 Lines 15-17 "A piconet starts with two connected devices, such as a portable PC and cellular phone, and may grow to eight connected devices");

registering said slave communication device which has issued the communication request to a waiting registration unit of said master communication device, in the issued order, when the number of currently connected slave communication devices is determined to have reached said second limited number (see claim 17 rejection and [Brown] Column 28 Lines 18-27 "FIG. 29G illustrates the hold sequence, which as mentioned above, will probably not be included in a preferred embodiment of the architecture 1100, but may be included in other embodiments. First, the master and slave agree to hold in state 1320. The standby or connection state 1322 is then entered for the specified duration, followed by the slave waking up and synchronizing to the master in state 1324. If there is a hit, the connection state is entered for the remaining packets in state 1326. If not, the standby or connection state 1322 is reentered"); selecting at least one of said slave communication devices and connecting it to said master communication device, in the order registered to said waiting registration unit (See claim 17 rejection and [Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 27 Lines 49-55, "FIG. 29B illustrates the page sequence. The CSM 1244 begins in the standby or connection state 1276 (for duration T.sub.page scan). The PAGE substate is initiated in state 1278. If there is a hit, the master response substate 1280 is entered. If there is no hit, the standby or connection state 1276 is reentered. Once in state 1280, if the master responds before a timeout period, then the connected state 1282 is entered"); and

selecting by said master communication device at least one of said slave communication devices to be released, when determined to have reached said second

limited number (See claim 17 rejection and [Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 28-31, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment" and [Tanaka] applicant admits in paragraph [0014] "In the Bluetooth, an effective method called as the park mode is defined for temporary release").

Claim 19

Brown in view of Fujioka teach the medium according to claim 17, the computer program code further performing:

judging by said slave communication devices whether or not to be connected to said master communication device, when communication request for said master communication device is issued ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 27 Lines 49-55, "FIG. 29B illustrates the page sequence. The CSM 1244 begins in the standby or connection state 1276 (for duration T.sub.page scan). The PAGE substate is initiated in state 1278. If there is a hit, the master response substate 1280 is entered. If there is no hit, the standby or connection state 1276 is reentered. Once in state 1280, if the master responds before a timeout period, then the connected state 1282 is entered");

transmitting a release report from said slave communication device to said communication control apparatus when connection for said master communication device is released; releasing connection between said master communication device

and said slave communication device when a release instruction for said master communication device is received from said communication control apparatus, during being connected to said master communication device ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 28-31, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment" and Column 5 Lines 52-53, "Slave units can also demand to be put into HOLD mode" where Hold and Park are both types of power saving modes and [Tanaka] applicant admits in paragraph [0014] "In the Bluetooth, an effective method called as the park mode is defined for temporary release").;

receiving by said communication control apparatus a connection report from said slave communication devices newly connected to said master communication device; registering information relating to said slave communication devices currently connected to said master communication device, to said communication control apparatus ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 1-5, "The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306");

judging by said communication control apparatus whether or not the number of said slave communication devices connected to said master communication device reaches said second limited number, based on the registered information (see claim 17 rejection and [Brown] Column 28 Lines 18-27 "FIG. 29G illustrates the hold sequence,

which as mentioned above, will probably not be included in a preferred embodiment of the architecture 1100, but may be included in other embodiments. First, the master and slave agree to hold in state 1320. The standby or connection state 1322 is then entered for the specified duration, followed by the slave waking up and synchronizing to the master in state 1324. If there is a hit, the connection state is entered for the remaining packets in state 1326. If not, the standby or connection state 1322 is reentered"); selecting by said communication control apparatus at least one of said slave communication devices of which connection for master communication device is to be released, when determined to have reached said second limited number; and transmitting a release instruction from said communication control apparatus to the selected slave communication device (See claim 17 rejection and [Brown] Column 4 Lines 15-17 "A piconet starts with two connected devices, such as a portable PC and cellular phone, and may grow to eight connected devices" and Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 28-31, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment" and [Tanaka] applicant admits in paragraph [0014] "it is common that there is an upper limit in the number of equipment to be connected in the communication standard " and "In the Bluetooth, an effective method called as the park mode is defined for temporary release").

Claim 20

The modified Brown reference teaches the medium according to claim 17, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and a release of connection between said master communication device and said slave communication devices is performed by setting in a park mode ([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7" and Column 28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

3. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,366,622 B1) in view of Lee et al. (US 2002/0090968 A1), and further in view of Fujioka (US 6,907,227 B2).

Claims 3 and 4

Regarding claims 3 and 4:

The modified Brown reference does not specifically teach the master communication device according to claim 1, wherein said release selection unit selects by priority said slave communication device which has performed the earliest

communication or said slave device which has been connected for the longest time among said slave communication devices connected currently.

Fujioka discloses however: ([Fujioka] Column 16 Lines 45-53 “In particular, in the step S10, one of the inactive slave terminals is selected based upon an order in which the slave terminals are placed in the active state. In other words, the master terminal 1 stores in the memory unit 80 the order in which the slave terminals are placed in the inactive state. For example, the slave terminals 9 through 11 are pit into the inactive state in the first-in-first-out (FIFO) order of the slave terminals 9, 11, and 10 as indicated in the memory unit 80”) in order that the “inactive states lasts equally among the slave terminals” ([Fujioka] Column 16 lines 55-57).

It would have been obvious at the time of the invention to one of ordinary skill in the art to combine the modified Brown reference to include “the inactive slave terminals is selected based upon an order in which the slave terminals are placed in the active state” as taught by Fujioka in order that the “inactive states lasts equally among the slave terminals” ([Fujita] Column 16 lines 55-57).

Response to Arguments

4. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARHAD ALI whose telephone number is (571)270-1920. The examiner can normally be reached on Monday thru Friday, 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Farhad Ali/
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446